that: (i) Ka-band fixed satellites will have a difficult time sharing the 27.5-29.5 GHz uplink band with LMDS licensees and that these satellites currently have a difficult time sharing the 17.7-19.7 GHz downlink band with point-to-point microwave users;[33/] (ii) there is no user demand for Ka-band fixed satellite service; furthermore, the sharing of Ka-band with terrestrial microwave users makes Ka-band unsuitable for VSAT operations; there are no pending license applications for Ka-band fixed satellite systems; (iii) Ka-band frequencies may be used as feeder links for LEOS if the earth stations are located outside urban areas;[34/] (iv) the experimental NASA ACTS satellite project, having only a four-year duration, should not receive protection against LMDS interference;[35/] and (v) the ACTS satellite will not meet user needs because the Ka-band is unsuitable for VSAT networks.[36/]

28. While Suite 12's comments correctly anticipated the points that satellite proponents advanced in their comments, Suite

29. Calling Communications Corp. ("Calling") claims to be planning a low earth orbit satellite system (LEOS) that would use Ka-band frequencies for both fixed and gateway links. However, Calling has not yet submitted any application to the Commission for such a system. It calls for EIRP limits on LMDS stations, a secondary status for LMDS, and a reallocation of 1000 MHz in the 27.5-29.5 GHz band exclusively for satellite use.

30. It is important to distinguish between the use of Ka-band for fixed links to fixed earth stations, and feeder or gateway links to gateway earth stations. Feeder links are used with mobile satellites or broadcast satellites to connect the satellite with a small number of fixed earth stations. These earth stations are used for control purposes and to interconnect with the terrestrial communications network, rather than to provide the primary (mobile satellite or broadcast satellite) service. Gateway earth stations operate on a different frequency band from the primary service. Only a small number of gateway or feeder earth stations are needed for any system. Gateway earth stations are operated by the satellite network licensee, not customers. The best current example (and possibly the only commercial example) of a satellite network with gateway earth stations is the Inmarsat network. As Calling correctly notes,

"feeder link or gateway earth stations can be located in sparsely populated areas where LMDS is not likely to be provided."[37/]

31. On the other hand, fixed earth stations at Ka-band would be used to provide the primary (fixed satellite) service to customers. They might be located at customer premises, and might be owned and operated by customers. There might be thousands or tens of thousands of such stations.

32. Although Calling has not submitted an application for its system, Suite 12 surmises that Calling is planning a hybrid system that would be licensed both as a LEOS system (with the primary mobile satellite service operating at L-band or S-band, and feeder links at Ka-band) and as a fixed satellite system operating at Ka-band.[38/] If this is so, Calling is contemplating a truly unique design that would require special Commission review and approval. Suite 12 is unaware of any FCC decisions that permit fixed satellite service to be provided from non-stationary orbiting satellites. Suite 12's view, at this time, is that such a design would make inefficient use of the orbit-spectrum resource and would not be permitted. In any case, a full investigation of such issues is needed before the Commission could possibly authorize the construction of such a system. Consequently, the

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[37/] Calling Comments at n.6.

[38/] Calling Comments, p. 2.

Commission cannot, and should not, make any decisions in this proceeding based on the speculative and unique system design that Calling has in mind.

33. Gateway earth stations can share the Ka-band with LMDS and point-to-point microwave, but they must be located outside urban areas. The Ka-band fixed satellite allocation, as was explained in Suite 12's Comments[39/], consists of an uplink band at 27.5-29.5 GHz and a downlink band at 17.7-19.7 GHz. The downlink band is already heavily used by short haul terrestrial microwave links in urban areas. Before Calling can hope to gain protection from the FCC against LMDS' use of Ka-band for terrestrial networks, Calling must specify both uplink and downlink frequencies for feeder link use, specify the locations of its gateway earth stations, and show that the downlink frequencies are clear at those locations. Suite 12 believes that locations which are clear from microwave interference at 17.7-19.7 GHz are in remote rural areas and therefore will be clear of LMDS operations as well.

34. Fixed earth stations are likely to have a difficult time operating at Ka-band. The situation is quite the same with C-band fixed earth stations. Terrestrial microwave operations are widespread at 4 and 6 GHz, and as a result, most C-band earth

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[39/] See, Suite 12 Comments at para. 22.

stations that use the full 500 MHz of the C-band allocation are located in remote rural areas. Only those C-band earth stations that operate on a few narrow frequencies (primarily those developed by Equatorial Communications) can be located in urban areas. The 17.7-19.7 GHz band is already heavily used by terrestrial point-to-point microwave. Moreover, more than 600 MHz of the 2000 MHz in the 17.7-19.7 GHz downlink band is licensed for point-to-multipoint use[40/] and, therefore, traditional frequency coordination may be impossible.

35. So far as Suite 12 is aware, Calling is the only entity that has even proposed a fixed satellite service for the 27.5-29.5 and 17.7-19.7 GHz Ka-band. The reason is simple. There is no demand for a new satellite service that requires station-by-station frequency coordination and licensing. But frequency coordination and licensing is required at these frequencies, because the bands are shared with terrestrial microwave rather than being available exclusively for satellite operations. The demand for new satellite service is limited to VSAT networks which may be deployed without station-by-station coordination and licensing. This is the way Ku-band VSAT networks are deployed, and Ka-band VSAT networks in the 19.7-20.2 and 29.5-30.0 GHz band may also operate this way.

[40/] The 18820-18920, 18142-18580 and 19160-19260 MHz bands are licensed for point-to-multipoint use.

36. Calling seeks to have the terrestrial allocation in the entire 27.5-29.5 GHz band downgraded to secondary[41/] or to prohibit LMDS from operations in 1000 MHz of the band.[42/] Calling does not tell the Commission why Calling cannot use the exclusive satellite allocation that already exists in the 29.5-30.0 and 19.7-20.2 GHz bands. Calling does not tell the Commission why these bands are insufficient to support any new satellite services demand which cannot be satisfied by the existing C-band and Ku-band satellite systems. Neither Calling nor any other party has shown that this exclusive satellite allocation would be inadequate to meet even the most optimistic forecast of demand.

37. With respect to an EIRP limit, we note that Section 21.107(b) of the Commission's Rules already provides such a limit. The limit of +55 dBm is the same that applies to the C-band satellite uplink band.[43/] Suite 12 suggests that no further action is warranted on Calling's request for an EIRP limit.

[41/] Calling Comments at p. 9.

[42/] Id. at p. 11.

[43/] Suite 12 requests that the output power and EIRP limits in Section 21.107 be interpreted as a power density per 20 MHz channel, rather than as a total power limit across the entire licensed band. This will give LMDS licensees the option of using transmitters of optimal bandwidths. Otherwise, if the limit were to apply to individual transmitters, licensees would have an incentive to use more transmitters of smaller bandwidth.

B. Motorola Satellite Communications ("MSC")

38. MSC seeks to prohibit LMDS operations on the 29.1-29.3 GHz frequency band to protect its feeder links. Such a prohibition gives new meaning to the phrase "regulatory overkill." The MSC LEOS system would use only two gateway stations in the U.S.[44/] It is unreasonable for MSC to ask for exclusive use and protection throughout the entire U.S. when protection is required at only two locations.

39. As Suite 12 noted previously herein, LEOS gateway earth stations can be located in rural areas where there is little or no likelihood of LMDS operations. MSC did not disclose the locations of its two gateway stations, perhaps because it has not yet decided on locations. If no decision has been made, MSC is free to select locations that will be distant from LMDS operations. MSC's claim that relocation of gateway earth stations would be economically prohibitive[45/] must, therefore, be rejected, both because MSC has not supplied any justification on this position beyond a bald assertion, and because MSC has not yet expended any funds for construction of earth stations.[46/]

[44/] MSC Comments at p. 4.

[45/] MSC Comments at p. 14.

[46/] Any expenditure of funds for construction at this time might be a violation of Section 319 of the Communications Act.

40. Moreover, the downlink frequencies (19.4-19.6 GHz)[47] that correspond to the MSC uplink feeder link frequencies are likely to be used by terrestrial microwave networks in most urban areas. In Suite 12's comments, it noted that this frequency range is already heavily used for point-to-point networks by cellular operators, local bypass carriers and local governments.[48] Consequently, this also suggests that MSC must locate its gateway stations in rural areas that are free from terrestrial microwave operations.

41. MSC has not justified its choice of 29.1-29.3 and 19.4-19.6 GHz for feeder links. So far as anyone can tell, MSC could have chosen any fixed satellite frequencies for feeder links. MSC could have chosen frequencies in the 29.5-30.0 and 19.7-20.2 GHz bands, which are free from any terrestrial microwave use, or frequencies at C-band or Ku-band. There is no obvious reason why the 29.1-29.3 and 19.4-19.6 GHz frequencies are the only ones MSC can use. It is certainly not true, as MSC claims[49] that these frequencies are "essential" for its LEOS system. Since MSC has

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[47] The normal transmit-receive separation between the Ka-band uplink and downlink frequencies is 9.8 GHz. The MSC transmit-receive separation is only 9.7 GHz. This discrepancy is unexplained, and appears to result in inefficient orbit-spectrum utilization.

[48] Suite 12 Comments at para. 33.

[49] MSC Comments, p. ii.

not yet filed any applications for earth stations, MSC can change its frequency selection.

42. The claim that traditional frequency coordination methods may be invalid at 28 GHz[50/] is a red herring. If it is agreed by the affected parties that frequency coordination is invalid, then the parties and the affected industry trade associations can negotiate an approach that will be acceptable. But at worst, what is at issue here amounts merely to quibbling about a difference of a few kilometers in separation between a LMDS receiver and a gateway satellite earth station.[51/]

43. The MSC calculation of interference from LMDS transmitters into MSC satellites is a gross overestimation of any possible interference problem. First, MSC's approach of simply calculating LMDS interference is improper. Because the band is

reallocation from point-to-point to LMDS. In other words, because there is an existing point-to-point allocation for 28 GHz, the proper baseline for comparison is point-to-point microwave interference, not the complete absence of such interference as MSC has assumed.

44. As is demonstrated at Appendix 3, attached hereto, "An Analysis of LMDS Uplink Interference to the Motorola Iridium Satellites" by Roger Freeman, LMDS interference into MSC satellites is nearly 35 dB below the satellite noise floor, and would, therefore, add only 0.03% to the noise received. This contradicts, by a factor of 100, the MSC claim of a 3% increase. Moreover, even 0.03% is an overestimate, because it conservatively assumes coherent addition of all interference sources, and conservatively ignores the polarization isolation that will occur for at least some of the interference sources. In addition, MSC satellites are in orbital motion and will receive interference only very briefly. For example, a satellite is likely to be in or near the main beam of LMDS transmitters only when it is at an elevation angle between 5 degrees and 25 degrees, or 40/360 = 11% of the satellite's orbit. Making these corrections, the interference feared by MSC from LMDS essentially disappears.

C. Loral Qualcomm ("Loral")

45. Contrary to Loral's claim[52/], there is no real U.S. demand for Ka-band fixed satellite systems. Only the experimental NASA ACTS system, which is discussed in detail below, is planned to operate in the 27.5-29.5 GHz band.[53/] Loral cites a number of possible applicants for Ka-band as feeder links, but cites no applicant who plans to operate a fixed satellite service. The speculative plans of Calling Communications, discussed above, and Celsat[54/], have not been filed with the Commission and deserve no weight in these deliberations. Likewise, the Canadian analysis cited by Loral[55/] is merely a study, not a policy, and, in any event, cannot be argued to apply to U.S. spectrum management decisions.

D. Hughes Space and Communications ("Hughes")

46. As Hughes correctly notes, "saturation of C and Ku band is not quite at hand in the United States."[56/] It is common knowledge that the bulk of existing domestic satellite capacity is now used for video distribution. With the growing commitments of

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52/ Loral Comments, p. 4.

53/ The FCC has received only one application for a Ka-band satellite, from Norris. 7 Fcc Rcd 4289 at n 17. But this system is not authorized in the 27.5-29.5 GHz band.

54/ Id., p. 6.

55/ Id., p. 7.

56/ Hughes Comments at p. 3.

cable programmers such as HBO to employ digital video compression, any saturation of the C and Ku bands is many years, or even decades, in the future. Fiber optics and compression techniques will further reduce the need for domestic satellites for voice and data services.

47. Hughes seeks to defer or prohibit LMDS use of 27.5-29.5 GHz in order to preserve this spectrum for possible future Ka-band satellite systems.[57/] This is not the first time that Hughes has sought to delay licensing of terrestrial systems in the Ka-band. When the Commission adopted its channel plan for the 17.7-19.7 GHz downlink band, Hughes asked the Commission to delay use of that band by terrestrial users.[58/] The Commission rejected Hughes' request then, because of "immediate demand for spectrum by terrestrial services"[59/], and it should reject Hughes' request now for similar reasons.

E. Norris Satellite Communications ("Norris")

57/ Hughes Comments at p. 3.

58/ See Memorandum Opinion and Order in Gen. Docket Nos. 82-334 and 79-188, (Joint Reconsideration of First Report and Order in Docket No. 79-188), released August 17, 1984, 49 Fed. Reg. 37760, at para. 41.

59/ Id.

48. Contrary to Norris' claim that "LMDS applications will most definitely cause harmful interference to Norris"[60/], they will not. Norris sought authority and was authorized to construct and launch a satellite to operate on 29.5-30.0 and 19.7-20.2 GHz.[61/] Norris did not seek, nor was it granted, authority for the 27.5-29.5 GHz band.[62/] Moreover, in light of the uncertain demand and technical novelty of its design, Norris could not show that it had sufficient financial commitments for its system; consequently, it is not unreasonable to question whether Norris will ever be able to proceed with the construction and launch of its system. In its Comments in this proceeding, Norris is deafeningly silent on its construction and launch schedule.

49. There are no "international implications" that would result from proposed reallocation in this proceeding, contrary to the suggestions of Norris[63/] and Loral.[64/] The proposed LMDS allocation would continue to be a fixed allocation, consistent with the current domestic and international allocation of the

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60/ Norris Comments, p. 3.

61/ 7 FCC Rcd 4289.

62/ Id. at para. 4.

63/ Norris Comments, p. 2.

64/ Loral Comments, p. 8.

band.[65/] In any case, neither Canada nor Mexico have any definite plans for Ka-band satellites. Any possible interference between LMDS and foreign Ka-band earth stations can be solved by a few kilometers of separation near the national borders.

F. NASA ACTS

50. NASA plans to launch an experimental satellite, the Advanced Communications Technology Satellite ("ACTS"), later this year. It will operate on a few frequencies within the 27.5-29.5 GHz band.[66/] The program has an expected life of four years. After the end of four years, it could be shut down or sold to a commercial operator.

51. The primary goal of the ACTS program is to test on-board satellite processing such as hopping spot beam technology and on-board signal switching.[67/] These techniques are equally applicable at C-band or Ku-band, and could be employed at these frequency bands if they prove successful. Other experiments will involve low speed data communications, high speed data communications, distribution of video and audio programming, and

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[65/] See Section 2.106 of the Commission's Rules; the Commission is not proposing to amend Part 2.

[66/] Uplinks will operate on 29.242 GHz, 29.263 GHz and 29.298 GHz. NASA Comments at n. 1.

[67/] NASA Comments, p. 4.

a variety of mobile communications services.[68/] A total of 44 earth stations will be used.[69/]

52. So far as can be determined, the only feature of the ACTS program that is specifically related to the use of the Ka-band is the test of dynamic rain fade compensation techniques.[70/] Every other element of the program relating to fixed satellite services and fixed earth stations could have been tested, and can be implemented, at C-band or Ku-band. Consequently, the economic benefits that NASA quotes from its business case studies[71/] could equally be obtained from employing C-band or Ku-band satellite systems.

53. Contrary to NASA's market studies[72/], the demand for Ka-band satellite services is not likely to materialize. This is because Ka-band is not suitable for VSAT networks with small earth stations that can be deployed in large numbers upon demand. Rather, Ka-band is shared with terrestrial microwave users; therefore, every earth station must be separately frequency coordinated and separately licensed. This is far different from

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[68/] Id., p. 5.

[69/] Id.

[70/] Id. at p. 4.

[71/] NASA Comments, pages 9-11.

[72/] NASA Comments, p. 12-15.

the situation at Ku-band, where the Commission has determined that blanket licensing of VSATs is appropriate because there are no terrestrial microwave users with primary rights. Users demand blanket licensing for VSAT networks, and that is simply not available at Ka-band. NASA's claims that "VSAT terminals are likely to be the most ubiquitous of FSS earth stations operating in the FSS Ka-band allocations"[73/] clearly shows that NASA has no understanding of the commercial marketplace for VSATs.

54. NASA has provided a calculation showing that sharing between Ka-band earth stations and LMDS will be difficult,[74/] but it has ignored the problems of sharing between Ka-band earth stations and terrestrial microwave in the 17.7-19.7 GHz downlink band. NASA will find few clear earth station sites in urban areas because of the widespread use of terrestrial microwave in the downlink band.

55. In practice, there is little chance of interference from LMDS transmitters into the ACTS satellite. First, Suite 12 notes that NASA's approach of simply calculating LMDS interference is improper. Because the band is currently allocated for point-to-point microwave, and interference calculation must provide for point-to-point microwave. The proper approach is to calculate

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[73/] Id., p. 20.

[74/] Id., p. 18.

interference expected from widespread deployment of point-to-point links, and then calculate the increase, if any, in interference that might be caused by the reallocation from point-to-point to LMDS. In other words, because there is an existing point-to-point allocation for 28 GHz, the proper baseline for comparison is point-to-point microwave interference, not the complete absence of such interference as NASA has assumed.

56. As is demonstrated at Appendix 4, attached hereto, "An Analysis of Uplink LMDS Interference to the NASA Acts Satellite" by Roger Freeman, NASA's interference calculation[75/] is in error and grossly overestimates the likelihood of interference from LMDS. The largest apparent error is the NASA estimate that its spot beam antenna will cover 121,000 square miles. But, based on a 3 dB beamwidth of 0.37 degrees, the coverage area is less than 23,000 square miles. In addition, NASA grossly overestimates the LMDS antenna gain in the direction of the ACTS satellite. Based on these corrections, the LMDS interference into the NASA ACTS satellite will be 13 dB below the minimum Io/No of -10 dB that NASA requires. Even this result is an overestimate, since it conservatively assumes coherent addition of all interference sources, and conservatively ignores the polarization isolation that will occur for at least some of the interference sources.

[75/] NASA Comments, Appendix B.

57. NASA claims that it will be difficult to undertake frequency coordination between NASA's fixed earth station uplinks and lMDS receivers.[76/] Suite 12 believes that NASA will find it very difficult to site any earth stations in urban or suburban areas, due to zoning restrictions and the widespread deployment of terrestrial microwave in the 17.7-19.7 GHz band, unless they employ site shielding and other interference mitigation techniques. Once NASA or its contractors submit their Part 5 Experimental Radio license applications to the Commission, specifying their earth station sites, it will be possible to analyze this question more completely. In any event, it should be noted that NASA plans to operate only a few earth stations, and only for four years.

58. NASA asks the Commission to balance the public interest benefits of LMDS against Ka-band satellite systems and to find that Ka-band satellites have a higher value to the public.[77/] But the evidence, which NASA itself cites, is to the contrary. Satellite operations in the Ka-band are not likely to evolve for many years.[78/] This is not the case with LMDS. There is an

There could be no clearer demonstration that the public interest will be served by LMDS.

59. The four potential public interest harms cited by NASA[79/] are insignificant or non-existent. First, there is no real demand for Ka-band satellite systems and may never be any demand, in light of the progress on digital compression. Second, the $1 billion investment in ACTS will provide public benefits in the form of satellite technology that can be employed at C-band and Ku-band, and need not be implemented solely at Ka-band. Third, even if LMDS were to contribute to blocking Ka-band satellite operations, the primary cause of blockage will be the widespread use of point-to-point and point-to-multipoint microwave at 17.7-19.7 GHz in urban areas; neither LMDS nor other fixed microwave will block Ka-band satellite operations in rural areas, and perhaps Ka-band satellite systems could complement LMDS in those areas. Fourth, while the portion of the electronics industry that builds satellites might suffer if Ka-band satellites are not constructed, another portion of the electronics industry, or even the same portion of the industry, will benefit from the vast new demand for LMDS technology and its related equipment.[80/]

[79/] Id., p. 27.

[80/] See Comments of MACOM and ALPHA.

60. As NASA notes[81/] the International Radio Regulations require that the output power of a transmitter above 10 GHz not exceed +10 dBW (10 watts); § 21.107 of the Commission's Rules echoes the International Radio Regulations in this regard. The +10dBW restriction never envisioned a license of 1000 MHz. Suite 12 believes, and seeks Commission clarification in the form of a rule to confirm, that this +10dBW limit is to be interpreted on a per 20 MHz channel basis for wideband operations such as LMDS. Otherwise, licensees will merely employ multiple transmitters of narrower bandwidth. The principle of technical flexibility espoused by the Notice supports the notion that licensees should be able to use the transmitter that is technically and economically optimal for each application.

61. NASA disagrees with the Commission's finding that LMDS can bring needed competition to the multichannel video distribution marketplace.[82/] Of all the comments filed in this proceeding, only NASA takes this position. There is nearly unanimous agreement that additional competition is needed and that LMDS appears to be an appropriate means to provide such competition. This is a simple disagreement between one government agency, whose mission is to develop satellite technology, and another agency, whose mission is to encourage the larger and more

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81/ Id., p. 21.

82/ Id., p. 29.

effective use of radio and regulate telecommunications in the public interest. Suite 12 believes that the Federal Communications Commission has made the decision that best serves the public interest.

VI. SERVICE AREAS

62. Suite 12 continues to believe that the Rand McNally Basic Trading Areas ("BTAs") provide a service area which will allow the most rapid proliferation of LMDS service to the public in the shortest period of time. BTAs will allow LMDS licensees to achieve sufficient economies of scale and the appropriate incentives for licensees to construct and operate LMDS systems.[83/]

63. Because there are 487 BTAs, and 734 MSAs/RSAs, it will take nearly twice as long to license LMDS operators in the MSA/RSA markets. Therefore, by using BTAs instead of MSA/RSAs, delivery of LMDS to the public will occur in half the time. The history of cellular system licensing presents an excellent example of how, despite the best intentions and efforts of the Commission, licensing can be delayed and service denied to the public. While

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[83/] Ameritech, Cellular TV and RSW Communications all supported the use of BTAs. Suite 12 agrees with the comments of Caribbean Communications and other comments that the Commission must establish service areas for U.S. Territories.

some of the first cellular systems are coming up for renewal after 10 years of operations, there are many RSAs that do not have either regular licensees or cellular service; service is unlikely in these RSAs for several more years.

64. The BTA service area provides the best chance that there will be rural LMDS because the nature of the BTAs is that there is a mix of both urban and rural populations. If MSAs/RSAs are used for LMDS, this new and innovative service will be denied to rural populations for many years; this is exactly what happened to rural populations with cable and with cellular services.[84/] The use of BTAs will require a licensee to provide service to both urban and rural areas simultaneously. With an LMDS infrastructure in place in the urban areas, the marginal cost of providing service to rural areas will be greatly reduced; a licensee will, therefore,

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[84/] It must be noted that there are only 306 MSAs, while there are 428 RSAs. Public Notice, "Cellular MSA/RSA Markets and Counties," (Report No. 92-40, January 24, 1992). Thus, there are nearly as many RSAs with sparse populations as there are BTAs. Because of the expense of constructing an LMDS system, it is doubtful that LMDS service will ever be provided in RSAs. LMDS is not cellular service. LMDS is a fixed service and it depends upon the people living and working in an area to be its customers. Cellular service, on the other hand, is a mobile service and has as additional potential customers, transients moving through a particular territory. For example, a small RSA with a population of 30,000, may have one or two heavily travelled interstate highways through it. The LMDS operator would have only those people living in the RSA as potential customers; the cellular licensee could have perhaps twice that many customers because of travel through the area and, in fact, most cellular customers may be transients.

have greater incentives to provide rural service.[85/] If a different LMDS licensee must be chosen to provide service in the rural areas, the new licensee will have to build the necessary infrastructure to serve the rural areas, assuming it makes economic sense to do so. This would not only be time consuming and wasteful of resources, but it also may not make economic sense. Hence, there may never be LMDS provided to many rural areas if the MSA/RSA market structure is mandated.

65. Moreover, because of the larger populations in the BTAs verses those in MSAs/RSAs, there is a larger potential customer base for the LMDS operator and, therefore, more potential revenue. This scenario not only makes the initial investment in a LMDS system more attractive, but it provides the requisite impetus to continue to expand the LMDS system and to implement new services for more people.

66. Finally, while the implementation of BTA service areas will undoubtedly require a larger investment of capital and more time to place an LMDS system into operation than would be required if MSAs/RSAs were used, this result will serve the Commission's goal of having only qualified and bona fide applicants seeking authority for LMDS systems. Despite comments to the contrary, the

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[85/] This will have the effect of a sort of "subsidy" for the rural area from the urban area operations.

Commission's goal is to see that LMDS is available to the public, both rural and urban, as soon as possible and not to create a bonanza, or get rich quick opportunity, for speculative applicants. The use of BTA service areas will help to accomplish this goal.

VII. CONSTRUCTION BENCHMARKS

67. The Commission must emphasize that proposed rule § 21.007 (c)(i) requires LMDS licensees to serve the population in a BTA and not merely transmit some sort of signal over a particular geographic area. LMDS is not like cellular service where areas that do not have any population do have highways which require the presence of a radio signal in case someone should pass through the area and wishes to make use of the service.

68. Most of the comments proposed less ambitious construction benchmarks than the Notice's proposed service to 90 percent of the population within 3 years of the issuance of a construction permit. Suite 12 believes benchmarks are necessary so that the Commission can assure itself that system construction is advancing and that, for whatever reason, a licensee is not warehousing the spectrum. However, any benchmarks must balance the competing goals of providing service to the public quickly and accommodating the realities of today's lending environment and

the availability of risk capital to construct such a system.[86/] Requiring construction within three years of grant of an authorization to 90% of the population is not a benchmark which strikes such a balance. Suite 12 believes that the benchmarks offered in its comments strikes such a balance.[87/]

VIII. APPLICATION PROCESS

69. Most comments support the use of a lottery. As stated in its comments, Suite 12 also supports a lottery. Suite 12 continues to believe that the most efficient way to conduct the lottery would be to require the filing of postcards with a "letter perfect" application required to be filed within 30 days of being selected as the tentative winner of the lottery.

70. Suite 12 continues to advocate that one of the 1,000 MHz allocations for LMDS should be devoted to noncommercial use. If the Commission refuses to adopt this proposal and insists on licensing two commercial systems per market, Suite 12 would agree with the comments of M3 that a potential applicant should be permitted to apply for both the Band A and the Band B license in

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[86/] See, generally, Comments of Alex Brown & Sons, Inc. It must also be noted that matters such as manpower availability, ability to install systems, equipment availability, and site availability must be taken into consideration.

[87/] Suite 12 Comments, pp. 34-37.